# CALFED Bay-Delta Program

## Conveyance Program
## Program Plan Year 7
(State FY 2006-2007; Federal FY 2007)

Implementing Agencies:

**California Department of Water Resources**
**U.S. Bureau of Reclamation**

June 15, 2006

CALFED Program Logo

# Introduction

This Conveyance Program Plan identifies the CALFED Program activities that are scheduled to be completed during State Fiscal Year (FY) 2006-2007 and Federal FY 2007 (October 1, 2006 and September 30, 2007). The Plan also describes the accomplishments of the previous year.

Readers familiar with past CALFED Program Plans will notice a difference between this plan and those prepared during previous years. The major variations are that the plan focuses on activities that will be undertaken in the upcoming year. Further, the plan does not contain the various sections found in previous plans such as "Performance Measures", "Integration of Science, Environmental Justice and Tribal Relations" and "Public Input and Outreach." However, a comprehensive discussion of the planned activities for the upcoming year can be found in the "Activity" section of this plan.

The goal of the Conveyance Program is to identify and implement water conveyance modifications in the Delta that will:

- Improve water supply reliability for in-Delta and export users
- Support continuous improvement in Delta water quality for drinking-water purposes
- Complement and, where possible, improve the Delta ecosystem

The basic Stage 1 strategy for the Conveyance Program is to develop a through-Delta conveyance alternative based on the existing configuration of the Delta with some modifications. As envisioned, moderate construction in the south and, possibly, the north Delta would occur within the first stage to improve conditions for the ecosystem and water management. The Stage 1 effort also includes studies and evaluations of major conveyance features to determine feasibility and, if feasible, allow for the projects to be ready for permitting and construction in later stages of the CALFED Program should they needed to meet Program objectives.

The programs, projects, and evaluations contained in the Conveyance Program are:

**South Delta Actions**

South Delta Improvements Program
(Increasing the permitted State Water Project (SWP) Delta diversion limit to 8500 cubic feet per second (cfs) and installing permanent operable gates in the south Delta)

Clifton Court Forebay (CCFB) Fish Screens/10,300 cfs
(Constructing a new screened intake to CCFB and increasing the SWP diversion limit to 10,300 cfs)

Tracy Fish Test Facility
(Constructing a test facility at the Central Valley Project (CVP) Delta pumping facilities)

Lower San Joaquin Flood Improvements
(Actions to improve flood protection and habitat)

**North Delta Actions**

Delta Cross Channel Re-Operation

(Evaluate and implement operations to improve fish protection and improve water quality)

Through-Delta Facility Evaluation

(Evaluate the feasibility of a screened diversion up to 4,000 cfs from the Sacramento River to the central Delta)

Franks Tract

(Evaluate flow and salinity to improve fish protection and improve water quality)

North Delta Flood Control and Ecosystem Restoration Improvement Program

(Design and construct floodway improvements in the lower Mokelumne River and Georgiana Slough areas)

**CVP/SWP Intertie Actions**

Delta Mendota Canal/California Aqueduct Intertie

CVP/SWP Clifton Court Forebay Intertie

Some actions contained in the Delta Improvements Package (DIP) have been incorporated into the Conveyance Program. These actions and the program within which they are incorporated are:

- the study of South Delta hydrodynamics, water quality and fish (CCFB Fish Screen/10,300 cfs);
- the South Delta Fish Facility Improvements (CCFB Fish Screen/10,300 cfs);
- the study to improve survival of Delta smelt in the fish salvage process of the Delta export facilities, referred to as the Collection, Handling, Transport and Release study (Tracy Fish Test Facility);
- improving the integration of the operation of the SWP and CVP by providing stored CVP water for SWP Delta water quality requirements and SWP Delta export capacity to pump CVP water for wildlife refuges (South Delta Improvements Program).

The "Complementary Actions" contained in the CALFED Program ROD for the Conveyance Program are the Temporary Barriers Project and the Sacramento and San Joaquin River Comprehensive Study. The Comprehensive Study has…. The Temporary Barriers Project continues as an annual activity in the South Delta and is included in this program plan.

A figure showing the geographic distribution of these actions is presented on the following page.

# Geographical Distribution of Activities

# Priorities for FY 06-07

This section discusses the priorities for the Conveyance Program for FY 06-07. Factors considered in establishing priorities are the need for information or study to inform the through-Delta conveyance alternative, the potential of proposed facilities to help meet CALFED Program objectives, the timing of the implementation of a proposed project, and the availability of funding for this year and future years.

Top priority actions for FY 06-07 focus on implementing improvements in the south Delta for local water level, water quality and salmon protection (the South Delta Improvements Program), informing the identification of improvements to the Delta fish facilities for Delta smelt survival (the Collection, Handling, Transport, and Release (CHTR) study), and all aspects of the information related to the through-Delta conveyance alternative (Delta Cross-channel Re-operation and Through-Delta Facility evaluation).

The proposed project under the SDIP has a physical/structural component and an operational component. The operational component addresses increasing the allowable SWP Delta export limit to 8500 cfs. The physical/structural component incorporates dredging and the installation of permanent, operable gates at four locations in the south Delta. The final SDIP EIS/EIR, and the associated Record of Decision and Notice of Determination, will include decisions regarding the physical/structural component only. A subsequent public process is planned to address the operational component (SDIP Stage 1). Cease and desist orders recently adopted by the State Water Resources Control Board (SWRCB) requires the Bureau of Reclamation (Reclamation) and Department of Water Resources (DWR) to remove a threat of not complying with water quality standards in the south Delta by July 1, 2009. The permanent operable gates are the means for meeting this order and, to meet the deadline, the Record of Decision/Notice of Determination (ROD/NOD) must be issued in September 2006.

The CHTR study is designed to identify improvements to the process of salvaging and releasing Delta smelt diverted into SWP and CVP facilities. This information is especially important given the population decline of Delta smelt. In addition to data collection, three elements of the study are planned for completion on FY 06-07. They are studies on predation, acute mortality and injury, and stress. The CHTR study is expected to be completed in 2007 and is funded by Proposition 13 and State Water Project funds.

Key elements of the through-Delta alternative are the Delta Cross-channel (DCC) Re-operation, the Through-Delta Facility (TDF) evaluation, and the Franks Tract Project. The Franks Tract Project is contained in the CALFED Water Quality Program. Studies of proposed facilities or DCC operations have provided useful information regarding potential water quality improvements and effects upon flow and fish. They also have pointed out the need to understand regional flow, water quality and fish movement in the Delta. As a result, flow and salinity monitoring stations are being installed in the north and central Delta with data collection to begin July 2006 to supportand a regional field

study of flow and water quality in FY 06-07 and fish movement, flow and water quality in FY 07-08.

Flow and water quality analyses will be conducted in mid-2007 based on data collected during July 2006 through March 2007. In addition, information regarding water quality effects of proposed operations of the DCC, TDF, and Franks Tract (independently and in combination) will be developed in FY 06-07 using 2-D computer simulations. The simulations are designed to refine and expand upon the early assessments of the potential water quality improvements associated with these projects. These analyses will be incorporated into a report to be completed by Fall 2007 which will summarize the studies and conclusions to date and inform the "End of Stage 1" decision.

The regional study of fish movement, flow, and water quality is planned for October 2007 through April 2008. Reports incorporating this information and making recommendations for the DCC and the TDF would be completed by late 2008. Activities in FY 06-07 include completion of the study description and a fish behavior study at Clarksburg. These activities and the monitoring and 2-D computer simulations are high-priority actions for FY 06-07 because of their importance to the recommendations on the DCC, TDF, and Franks Tract project.

# Accomplishments

| Conveyance Program Accomplishments in Year 6 |
|---|
| South Delta Actions – to increase State Water Project (SWP) and Central Valley Project (CVP) export capability, improve the Delta ecosystem through fish protective measures, and ensure that local in-Delta agricultural water needs are met. |
| South Delta Improvement Program - 8,500 cfs and Permanent Operable Gates<br><br>Activity Undertaken: Preparation of draft EIS/EIR; circulation of document for public review and comment. Complete the draft ASIP. Initiate ESA/CESA consultation on the construction and operation of permanent operable gates in the South Delta.<br><br>Accomplishments: Draft EIS/EIR circulated for public review in winter (05/06). Comment period ended 02/06. Public comments are being evaluated and responses are being drafted.<br><br>Unfinished portion of activity/rationale: The completion of the final EIS/EIR and all appropriate permits were expected by the end of this fiscal year (June 2006). The schedule has slipped by a few months and a final document is not expected until late August 2006. |
| Clifton Court Fish Screens and 10,300 cfs:<br><br>Activity Undertaken: (The effort to increase the export capability of Clifton Court Forebay to 10,300 cfs has been deferred until methods for successfully screening fish or reducing predation in the forebay are identified.) A. Work on a multi-year fish and hydrodynamic study in the south Delta. Study work includes: field studies to collect larval fish, zooplankton, water quality, and hydrodynamic data; diet analyses of key pelagic species; and exploratory salvage analyses. B. Also, the South Delta Fish Facilities Forum agreed to study ways to reduce fish predation in Clifton Court Forebay with the existing screening facilities. (This effort is referred to as the South Delta Fish Facilities Improvements in the Delta Improvements Package. One alternative to be considered is referred to as the "short circuit" alternative.) |

Clifton Court Fish Screens and 10,300 cfs continued)

Accomplishments: A. Preliminary report (IEP newsletter) on larval fish behaviors in the South Delta. Preliminary report (IEP newsletter) discussing decadal salvage patterns with regards to hydrodynamic conditions (i.e., E/I ratios) and night-day periods. B. *Information to come.*

Unfinished portion of activity/rationale: Information to come.

Tracy Fish Test Facility:

Activity Undertaken: 1. On-going research activities. 2. Replace trashrack cleaner. 3. Research new primary and secondary louvers and cleaners. 4. Replace fish haul trucks and transfer bucket. 5. Perform feasibility study for new secondary screening/ transfer system. 6. Renegotiate the Tracy Direct Loss Agreement. 7. Working on three fish studies as part of the CHTR Study; Predation, Delta Smelt Acute Mortality and Injury, and Delta Smelt Stress study. Also working on two elements of the New Technology portion of the CHTR Study.

Tracy Fish Test Facility (continued):

Accomplishments: 1. Conducted research activities on site and in lab related to delta smelt salvage efficiencies, debris management, predation control, Chinook salmon handling, fish passage, hydraulic analysis, and water chemistry. 2. Awarded contract for replacement of trashrack cleaner. 3. Completed lab testing of prototype cleaners to be considered for use. 4. Acquisition of new trucks and fabrication of new tanks and transfer bucket. 5. None – no funding has become available this fiscal year to accomplish activity. 6. Have a new agreement in place and identify a source of funding. 7. Department of Fish and Game studies are underway and have been collecting data. Data Collection for all 3 DFG CHTR studies to be completed by the end of 2006. Equipment for the New Technology Element 2 Study has been installed and data collection has started. Element 3 is currently being installed with data collection scheduled to start in August 2006.

Unfinished portion of activity/rationale: 1. Perform additional studies for delta smelt under different pumping scenarios. Consider additional debris handling improvement measures. Continue to track/analyze predator behavior. Continue to consider alternative bypass operations to improve ability to meet D-1485 salvage criteria. Complete fish handling research and consider for implementation. Continue to collect water chemistry data for research purposes and external usage. 2. On-site performance and fish passage analysis. 3. Test devices in the field. 4. Monitor how well the new trucks and transfer bucket work after replacement and fine tune as necessary. 5. Everything. 6. None. 7. None (*Clarify)*

Lower San Joaquin Flood Improvements:

Activity Undertaken: Preparation of concept project documentation for the Lower San Joaquin River in support of federal funding for a USACE feasibility study. Begin study of flood control alternatives and requirements.

Accomplishments: Worked cooperatively with the USACE and the South Delta Water Agency (representing 16 reclamation districts) in the preparation of a San Joaquin River Flood Control study. Draft study document submitted to USACE and DWR by SDWA, including local funding for local sponsorship in the amount of $0.15 million.

Unfinished portion of activity/rationale: Study work not begun because the federal funding for feasibility concept study was not approved. No funding for this effort within DWR. The local sponsor will consider funding preliminary study work should the potential for State or federal funding improve.

North Delta Actions – to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.

Delta Cross Channel Re-Operation and Through-Delta Facility (Delta Improvements Package):

Activity Undertaken: Execute a contract for computer modeling evaluation of the hydrodynamics and water quality affects of various TDF, DCC re-operation and Franks Tract alternatives; Install monitoring stations in the central Delta; Execute a contract with USGS to conduct a regional field study for water quality, flow and fish monitoring and the associated analyses; Enter into an agreement with the Department's Division of Engineering for conducting a reconnaissance and construction pre-feasibility study for the Through Delta Facility (TDF) project. Complete the administrative procedures, i.e. concept paper, budget change proposal, requesting funds and staff for future years to support the planned tasks for these projects. Frank's Tract: Installation of flow and salinity monitoring stations in the Central and North Delta, hydrodynamic model study of pilot project alternatives for Franks Tract, conceptual study of various alternatives for the preferred pilot project, and testing of equipment to be used in the regional fish and water quality study.

Delta Cross Channel Re-Operation and Through-Delta Facility (Delta Improvements Package) continued:

Accomplishments: Contract completed with Resource Management Associates (RMA) for computer modeling studies. The purpose of this agreement is to evaluate the hydrodynamics and water quality affects of various TDF, DCC re-operation and Franks Tract alternatives. RMA is expanding its Bay-Delta Model (Model) to provide two-dimensional numerical modeling of hydrodynamics and salinity analyses of proposed TDF/DCC and Franks Tract alternatives.

The Bay-Delta Office is working on an agreement to be completed by June 30, 2006, with the Department's Division of Engineering (DOE) for a reconnaissance and construction pre-feasibility study for the TDF project. This study will include the major findings and recommendations that should be considered in the engineering and construction of such a facility.

Salinity monitoring stations have been installed in the central Delta and data is being collected for the Regional Field Study. The installation of new flow monitoring equipment will be completed by June 2006.

Franks Tract: The hydrodynamic model study of pilot project alternatives for Franks Tracts was completed, a conceptual study of various alternatives for the preferred pilot project was completed, and testing of fish tagging/monitoring equipment was completed.

Unfinished portion of activity/rationale: The contract between DWR and the USGS to conduct the regional field study and analyses is not completed. A contract between the USGS and the USBR is being completed soon to apply almost $400,000 to this effort to keep the regional fish monitoring study on schedule.

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Activity Undertaken: Preparation of North Delta Flood Control and Ecosystem Restoration EIR.

Accomplishments: Significant progress toward completing environmental document including clarifying project scope as DWR was asked to expand the scope of the environmental document to include additional flood control options advocated by Sacramento County for the Beach Stone Lakes and Franklin pond areas. Refined project alternatives to allow for implementation flexibility. Completed rough benefit-cost analysis and initiated refined benefit-cost analysis to be completed by December 2006. Completed Grizzly Slough element refinement including science panel review and hydraulic modeling studies. Prepared and submitted proposal for USACE CALFED Act funding. Completed sediment dynamics modeling. Anticipate completion of Public Draft EIR in fall 2006 and identification of long-term owner and implementation funding source in the first half of 2007.

Unfinished portion of activity/rationale: Implementation funding and long-term owner for North Delta properties not yet identified. DWR staff recommends that if a long-term owner and implementation funding not identified by the time of Public Draft review completion and choice of preferred alternative, DWR resources be diverted to other activities until this project can go forward to completion.

Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions– to consider the need for two specific SWP/CVP intertie projects which physically connect the SWP and CVP facilities.

Delta Mendota Canal/California Aqueduct Intertie (Delta Improvements Package):

Activity Undertaken: Preparation of CEQA and NEPA environmental documentation; completion of inter-agency agreements and permitting; preparation of final design documentation; completion of Intertie construction contracting; begin Intertie construction.

Accomplishments: The USBR (Federal lead agency) issued a FONSI and the SLDMWA (State lead agency) issued a NOD, issued final design documentation, completed competitive bidding for construction and awarded a contract for construction. DWR and the USBR negotiated principles of agreement for construction of the intertie.
Unfinished portion of activity/rationale: Construction delayed due to filing of injunction against initiating construction. USBR withdrew the FONSI Mar 2006 and suspended the construction contract pending preparation and approval of an EIS.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Activity Undertaken: Work on this project has not yet commenced.

Complementary Actions

Temporary Barriers Project:

Activity Undertaken: Coordinate with the VAMP group for the VAMP 2006 experiment. Prepare for the TBP 2006 Installation. Coordinate with south Delta farmers/divertors to monitor past dredged sites, identify potential needs for portable pumps or potential dredging sites. Monitor channel bathymetry of dredged sites.

Accomplishments: Three agricultural barriers were successfully installed in the south Delta. The spring Head of Old River Barrier was not installed due to high San Joaquin River flows; however, the fall Head of Old River was installed in September per DFG request. Portable pumps were installed at the Tom Paine Slough intake to safeguard the water levels in the slough; in addition, two portable pumps were installed on Old River at the west end of Union Island just upstream and downstream of the Clifton Court Forebay intake gates. The sites for these portable pumps were also dredged in October of 2005.

Unfinished portion of activity/rationale: Continue the bathymetry monitoring of the dredged sites, and work with south Delta diverters for potential new dredging sites.

Additional Actions Under Delta Improvement Package

Study of South Delta Hydrodynamics, Water Quality, and Fish:

(See Clifton Court Fish Screens and 10,300 cfs)

South Delta Fish Facilities Improvements

(See Clifton Court Fish Screens and 10,300 cfs)

Study of Delta Smelt and Fish Facilities:

(See Tracy Fish Test Facility)

SWP/CVP Integration Plan:

(See South Delta Improvement Program – 8,500 cfs and Permanent Operable Gates)

# Activities

## Conveyance Program Activities Planned for Year 7

South Delta Actions – to increase State Water Project (SWP) and Central Valley Project (CVP) export capability, improve the Delta ecosystem through fish protective measures, and ensure that local in-Delta agricultural water needs are met.

### South Delta Improvement Program - 8,500 cfs and Permanent Operable Gates

Activity: Finalize SDIP EIS/EIR, including SWP/CVP integration planning. Secure all appropriate permits. Purchase land necessary for construction. Advertise and award construction contract. Initiate construction.

Expected Deliverables/Products: Final EIS/EIR, 404 Permit, 401 Certification, Section 10 permit, CESA Determination, USFWS Biological Opinion, NOAA Fisheries Biological Opinion, DFG 1601 permit, CVRWQCB Dredge Waiver, AQMD Air Emissions Permit, Contract for construction, and deeds on several pieces of property for permanent gate structures.

Schedule: DWR certifies EIR, adopts project, files NOD (August 2006); Public Review of Final EIS (NEPA only) (July/Aug 2006); Reclamation issues ROD (September 2006); Advertise for construction/supply contract (September-November 2006); Begin gate construction (November-December 2006) will be updated.

Cost: SDIP staff, final design, monitoring, contracting and fish study costs for FY 06-07: $9 Million; Construction costs for Permanent Gates in FY 06-07: Approximately $26 Million

Public Involvement and Outreach: Public Involvement will be a part of the SDIP Stage 2 decision process on 8500 cfs. Public will be given an opportunity to review the Final EIS under the NEPA review period

Linkages: Environmental Restoration Program and the Water Quality Program.

Potential Problems: Acquiring all approvals by Fall 2006 to allow construction of gates components to begin in late 2006 and gates to be constructed and operable by Spring 2009. (Meeting this schedule is very important to the reliable operation of the SWP and CVP. The SWQCB has issued a Cease and Desist Order to DWR and the USBR to remove a threat of violating south Delta water quality standards by July 2009, The permanent operable gates are required to improve south Delta water quality and remove the CDO).

### Tracy Fish Test Facility:

Activity: 1. Continue research activities to improve screening efficiency. 2. Design new primary louvers and cleaning system. 3. Design new secondary louvers and cleaning system. 4. Construction of new secondary system. 5. Construction of New Research Facility/Development of Land 6. Execute Tracy Direct Loss Agreement. 7. The Department of Fish and Game will complete data collection, analyze data and write reports on the three collection, handling, transportation and release (CHTR) studies. This will include the CHTR Predation Study, Delta Smelt Acute Mortality and Injury, and the Delta Smelt Stress Study. The CHTR New Technologies Evaluation program will continue to collect data on Elements 2 and 3. DWR will develop a plan to evaluate suggested improvements to Fish Facilities included alternatives to re-plumb Clifton Court Forebay to address prescreen fish loss, as part of the South Delta Fish Facilities Improvements project. In addition, DWR will continue to evaluate and make recommendations to improve the survival of salvaged fish.

Tracy Fish Test Facility continued:

Expected Deliverables/Products: 1. Continuation/ completion of various research efforts related to salvage improvement of Delta smelt, Chinook salmon, striped bass, and other listed/POD species. Also continue to assess/study hydraulic performance, predation control, and debris management. 2. Complete design. 3. Complete design. 4. Award contract to construct system. 5. Award contract to fill in abandoned intake channel (AIC). 6. Implement operational guidelines and make payments to the state (DFG) for loss of fish at the TFCF/TPP. 7. The Department of Fish and Game will provide Final Reports on the Predation Study, Delta Smelt Acute Mortality and Injury and the Delta Smelt Stress Study. DWR will develop a plan and resource requirements to determine what information is needed to address possible improvement alternatives as part of the South Delta Fish Facilities Improvements project.

Schedule: 1. conduct research activities both on site and in the lab during course of the year. 2. Complete design sometime during fiscal year. 3. Complete design sometime during fiscal year. 4. Award contract as soon as feasible after completion of design. 5. Fill in AIC sometime during fiscal year. 6. Make payments sometime during the fiscal year. 7. The Department of Fish and Game will complete all data collection by January 2007 and provide Final Reports by June 30, 2007. The CHTR New technologies will continue data collection throughout the year for both elements 2 and 3.

Cost: 1. $1,914,000 (Presidents Budget). 2. $200,000 (no funding at this time). 3. $250,000 (no funding source at this time). 4. $250,000 (no funding source at this time). 5. $5,000,000 (no funding source at this time). 6. $1,000,000 (no funding source at this time). 7. $2,200,000.

Public Involvement and Outreach: 1. Conduct monthly Tracy Technical Advisory Team meetings. Update Tracy Research website information. Publish Tracy Research Volume Series. 2. Monthly TTAT meetings. 3. Monthly TTAT meetings. 4. Monthly TTAT meetings. 5. Monthly TTAT meetings. 6. Monthly TTAT meetings.

Linkages: 1. None. 2. None. 3. None. 4. None. 5. None. 6. Ecosystem restoration. 7. The CHTR studies are a multi-agency program and under review by the IEP program.

Potential Problems: 1. Funding (if additional cuts occur). 2. No funding. 3. No funding . 4. No funding If the feasibility study work cannot be conducted in Year 6, then the design work will slip at least one year to Year 8. 5. No funding. 6. No funding source has been determined. 7. No problems anticipated.

Lower San Joaquin Flood Improvements:

Activity: If federal funding becomes available the USACE will complete program management plan (PMP) and feasibility cost share agreement (FCSA) and begin initial stages of San Joaquin River Flood Control Study with local sponsor SDWA (representing 16 reclamation districts).

Expected Deliverables/Products: Program management plan and cost share agreement.

Schedule: Plan and agreement will be completed by end of federal year 2007 if federal funding becomes available.

Cost: $300,000 ($150,000 federal; $150,000 local)

Public Involvement and Outreach: Local consensus meetings with concerned stakeholders to develop study priorities and needs.

Linkages: Environmental Restoration Program.

Potential Problems: Non-congressional approval of funding. No State funds available.

North Delta Actions – to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.

Delta Cross Channel Re-Operation and Through-Delta Facility (Delta Improvements Package):

Activity: Preliminary computer modeling evaluation of the hydrodynamics and water quality affects of various TDF, DCC re-operation and Franks Tract alternatives. Complete the reconnaissance and construction pre-feasibility study for the TDF project. Assemble study results into a pre-feasibility document. Complete administrative procedures, i.e. concept paper, budget change proposal, requesting funds for future years to support the planned tasks for these projects. Regional Field Study: Complete and receive approval of study proposal; field test fish monitoring equiprment. In FY 07-08 several studies will be conducted in the north, west and central Delta region to evaluate the behavior/migratory path of salmon and salinity resulting from operation of DCC under varying river flow and tidal conditions; Data obtained from flow and salinity monitoring equipment will be analyzed in conjunction with the results from the above mentioned studies to determine recommended operation of DCC. Franks Tract: Work on the Franks Tract project will include collection and analysis of flow and salinity data from stations in the Central and North Delta, refinement of the numerical model to study the effect of pilot project alternatives on the hydrodynamics and salinity in the Franks Tract region. Collection of baseline data for fisheries, Egeria, Corbicula, mercury methylation, dissolved organic carbon will be started. The CEQA/NEPA process will also be initiated during the fiscal year.

Expected Deliverables/Products: Preliminary computer modeling evaluation of the hydrodynamics and water quality affects of various TDF, DCC re-operation and Franks Tract alternatives. These preliminary modeling results will inform decisions regarding the pre-feasibility of the TDF. Completion of the reconnaissance and construction pre-feasibility study for the TDF project and assemble into a report. Completion of administrative procedures, i.e. concept paper, budget change proposal, requesting funds for future years to support the planned tasks for these projects. Regional Field Study: Monitoring data for salinity and flow through the year; analysis of salinity and flow data; purchase of flow and fish monitoring equipment; report for testing of flow and fish monitoring equipment; completed regional study proposal. Franks Tract: report for model study for impacts of pilot project on Delta hydrodynamics; partial baseline data for fisheries, Egeria, Corbicula, mercury methylation, dissolved organic carbon, and initiation of CEQA/NEPA process.

Schedule: See above and discussion under “Schedules.”

Cost: Pre-feasibility study $180,000. Franks Tract budget includes: $7.5 million in bond funds and $0.9 million in State Water Funds.

Public Involvement and Outreach: Conduct public and technical advisory outreach efforts to obtain feedback regarding different aspects of the project. Franks Tract - As part of the CEQA/NEPA process, meetings with be arranged in the Central Delta region to discuss the potential pilot project with the public and all responsible agencies.

Linkages: Water Quality Program and Environmental Restoration Program.

Potential Problems: DCC operation and salmon monitoring study is planned to be done in fall of 2007. This study is dependent upon coordination of water releases, of water releases, pumping and DCC operations. ,

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Activity: Complete North Delta Flood Control and Ecosystem Restoration Admin and Public Draft EIR. Secure implementation funding and long-term owner for McCormack-Williamson Tract and Staten Island properties.

Expected Deliverables/Products: Public Draft EIR assuming funding from the USBR is not rescinded and assuming fundning continues; Final EIR.

Schedule: Public Draft EIR- October 2006; Final Draft EIR- March 2007

North Delta Flood Control and Ecosystem Restoration Improvements Program continued:

Cost: $0.47 million General Fund for DWR staff

Public Involvement and Outreach: Participation is achieved through meetings of the North Delta Improvements Group, North Delta Agency Team and the Mokelumne-Cosumnes Watershed Alliance. Participants include DWR, DFG, State Lands Commission, RWQCB, Delta Protection Commission, Reclamation Districts, USFWS and National Marine Fisheries Service.

Linkages: The development of North Delta Flood Control and Ecosystem Restoration Project is expected to result in ecosystem improvements in the Delta. This project will be coordinated with the Ecosystem Restoration Program. The North Delta Flood Control and Ecosystem Restoration Project will have direct and indirect land-use implications for rural communities and agricultural landowners in the Delta. This projects' planning and development efforts will be coordinated with the Bay-Delta Public Advisory Committee's Working Landscape Subcommittee to integrate, to extent reasonably possible, a working landscape approach to implementation. The North Delta Flood Control and Ecosystem Restoration Project is expected to involve levee improvements in the Delta and will involve coordination with the Levee System Integrity Program.

Potential Problems: The lack of inclusion of North Delta Flood Control and Ecosystem Restoration Project in the CBDA 10-yr action plan has been perceived by many as general loss of CALFED support; subsequently, the USBR consultant contract for completion of EIR has been targeted for termination and disencumbering early in favor of other high-priority items. Project not likely to proceed beyond completion of Public Draft environmental document without renewed CALFED support. No implementation funding for design and construction has been secured. No long-term landowner for Staten or McCormack-Williamson Tract has been identified.

Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions– to consider the need for two specific SWP/CVP intertie projects which physically connect the SWP and CVP facilities.

Delta Mendota Canal/California Aqueduct Intertie (Delta Improvements Package):

Activity: Complete EIS, re-solicit construction contracts, and initiate construction.

Expected Deliverables/Products: Administrative and public draft EIS document.

Schedule: Final EIS and ROD, and award contracts.

Cost: $31 million ($25 million local, $5 million federal, $1 million [No funding source at this time])

Public Involvement and Outreach: Preparation and release of public information notices, public review and comment on draft environmental documentation.

Linkages: No linkages have been identified.

Potential Problems: Additional court injunction or action preventing construction.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Activity: Work on this project has not yet commenced.

## Complementary Actions

### Temporary Barriers Project:

Activity: Continue the south Delta temporary barriers installation to improve water levels for south Delta diverters. Coordinate with various regulatory agencies and south Delta diverters to resolve any water level and water quality issues that might arise.

Expected Deliverables/Products: Install, operate, and remove barriers. Prepare regular reports.

Schedule: The operation of the HORB, MR, and DMC barriers typically begins on April 15 each year. The operation of the GLC barrier begins on June 1. The removal of the spring HORB generally begins May 16 each year. The removal of the Ag barriers begins early November. The operation of the fall HORB begins mid-September and the removal begins early November.

Cost: $6.6 million (SWP funding)

Public Involvement and Outreach: Coordinate with South Delta Water Agency, local landowners, and Reclamation Districts.

Linkages: The Delta smelt Biological Opinion, water quality, river flows, governs the installation and removal of the barriers.

Potential Problems: Naturally occurring high flows in the San Joaquin River.

## Additional Actions Under Delta Improvement Package

### Study of South Delta Hydrodynamics, Water Quality, and Fish:

(See Clifton Court Fish Screens and 10,300 cfs)

### Study of Delta Smelt and Fish Facilities:

(See Tracy Test Facility)

### SWP/CWP Integration Plan:

(Included in the South Delta Improvement Program.)

# Schedule

## Conveyance Program Schedule – Program Plan Year 7

South Delta Actions – to increase State Water Project (SWP) and Central Valley Project (CVP) export capability, improve the Delta ecosystem through fish protective measures, and ensure that local in-Delta agricultural water needs are met.

South Delta Improvement Program - 8,500 cfs and Permanent Operable Gates

DWR certifies Stage 1 EIR, adopt project and file NOD (August 2006)
USBR issues ROD (September 2006)
Permanent operable gate construction (November-December 2006 through June 2009))
Begin Stage 2 environmental evaluation
Complete Stage 2 environmental evaluation and permitting (December 2009)

Clifton Court Fish Screens and 10,300 cfs:

Study of South Delta Hydrodynamics, Water Quality, and Fish:

Conduct spring field sampling in South Delta, process samples, examine salvage databases, prepare prelim reports (FY2006)
Complete lab analyses, analyze all data sets, including hydrodynamic data provided by USGS, incorporate field data into 3-D model, prepare report and manuscript (FY2007)
Refine 3-D model, review and revise manuscript, make result presentations (FY2008)

Tracy Fish Test Facility:

Continue research activities to improve screening efficiency, design new primary louvers and cleaning system, and design new secondary louvers and cleaning system FY 2007

Construct new secondary system FY2008/09

Begin construction of New Research Facility/Development of Land FY2008/2009

Execute Tracy Direct Loss Agreement FY2007

Complete CHTR data collection and analyses January 2007

Submit final CHTR reports June 2007

Lower San Joaquin Flood Improvements:

Complete program management plan (PMP) and feasibility cost share agreement (FCSA) (FY2007)

Conduct consensus meetings and development of project plan (FY2007-2008)

Conduct San Joaquin River Flood Control Study with local sponsor SDWA (FY2008-2009)

North Delta Actions – to improve flood protection and conveyance facilities, water quality, Delta fisheries, and avoid water supply disruptions, to increase the water supply reliability for the SWP and CVP and to enhance the Delta ecosystem.

Delta Cross Channel Re-Operation and Through-Delta Facility (Delta Improvements Package):

Perform reconnaissance and construction pre-feasibility study July of 2006 - June 30, 2007.

RMA Contract:

- Calibrate Model & develop performance measures January 2006 – March 2006
- Evaluate salinity impacts Franks Tract alternatives April 2006-June 2006
- Evaluate salinity impacts of TDF/DCC project April 2006-June 2007
- Evaluate operation alternatives and optimization January 2006-June 2007
- Simulate multiple water years, drought conditions and levee break scenarios July 2006- March 2007
- Evaluate capabilities of alternatives to manage drought and levee breaks October 2007-June 2008
- Evaluate phased implementation of preferred alternative January 2006 – June 2007
- Implement particle tracking in support of regional fish and water quality study January 2007-Septemberr 2007
- Submit draft and final summary reports July 2007 – June 2008

Regional Field Study:

- Install flow and water quality monitoring stations by June 2006
- Conduct fish monitoring study October 2007 – April 2008
- Fish and water quality data analyses completed March 2008
- Evaluations and recommendations reports: DCC Re-Op August 2008; TDF November 2008

Franks Tract (CALFED Water Quality Program):

- Flow and salinity data collection/analysis: 2005 thru 2009
- Modeling to study impacts of pilot project on Delta hydrodynamics: Spring 2007
- Regional fish study and water quality study: Fall 2007
- Collect baseline data for fisheries, Egeria, Corbicula, mercury methylation, dissolved organic carbon: 2007 thru 2008
- CEQA/NEPA process: 2007 thru 2009
- Final design of pilot project:2008 thru 2009

North Delta Flood Control and Ecosystem Restoration Improvements Program:

Administrative Draft EIR-May 2006;

Public Draft EIR without preferred alternative- October 2006;

Select Preferred Alternative and identify longterm owner – December 2006

Final EIR- March 2007

Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions– to consider the need for two specific SWP/CVP intertie projects which physically connect the SWP and CVP facilities.

Delta Mendota Canal/California Aqueduct Intertie (Delta Improvements Package):

Final EIS March 2007.

ROD April 2007.

Re-solicit construction contract May 2007

Initiate construction September 2007

Complete Intertie construction Fall 2008.

Clifton Court Forebay/Tracy Pumping Plant Intertie:

Work on this project has not yet commenced.

Complementary Actions

Temporary Barriers Project:

Install and operate the HORB, MR, and DMC barriers April 15 each year through 2008..
Remove HORB May 16 each year.
Install and operate the GLC barrier June 1 each year.
Install fall HORB in mid-September each year.
Remove the MR and DMC Ag barriers and fall HORB early November each year.

Additional Actions Under Delta Improvement Package – objectives that were not analyzed in the final Programmatic EIS/EIR.

Study of South Delta Hydrodynamics, Water Quality, and Fish:

(See Tracy Fish Test Facility)

Study of Delta Smelt and Fish Facilities

(See Clifton Court Fish Screens and 10,300 cfs)

# Schedule of Activities

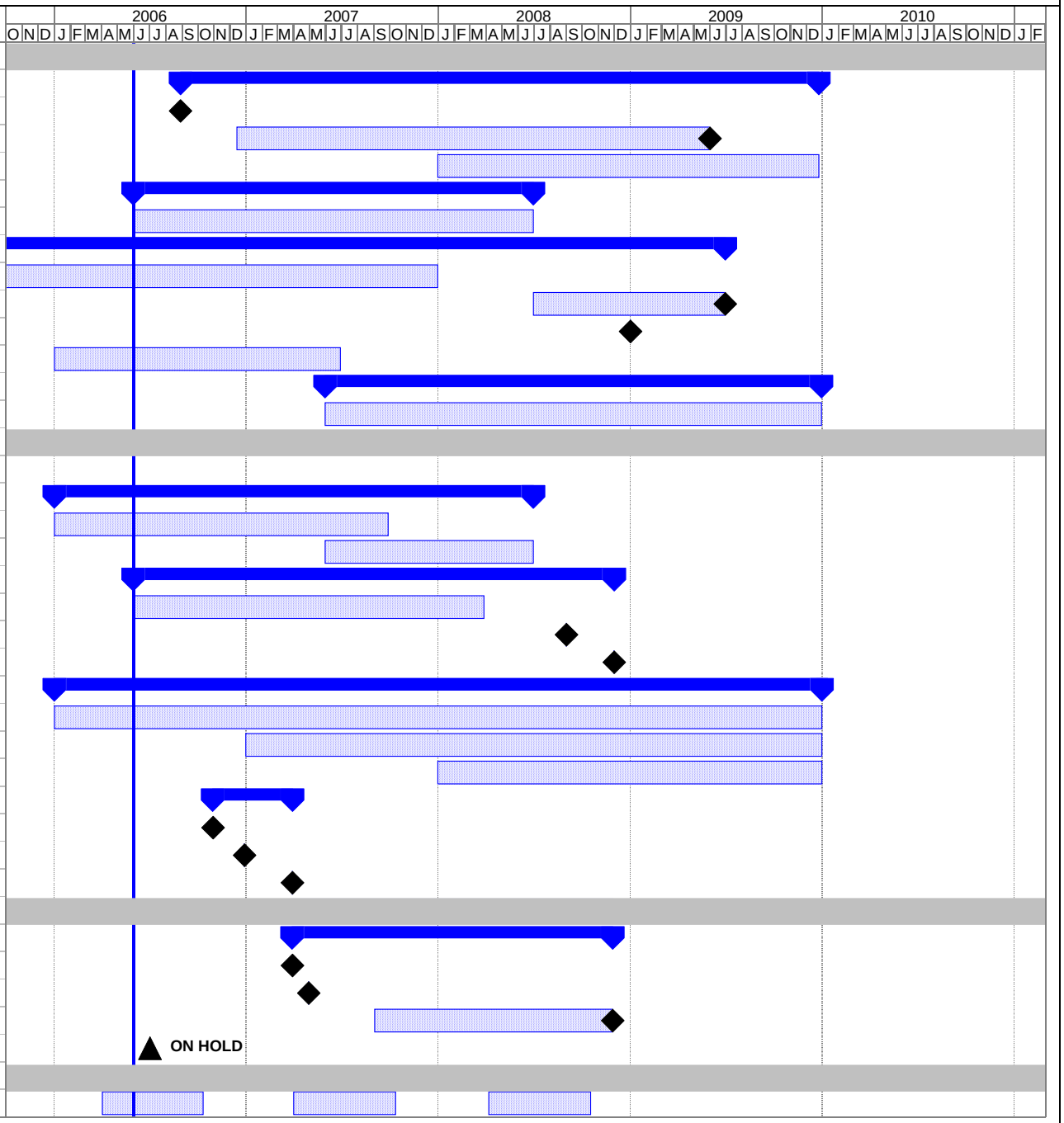
# Budget

| Conveyance<br>($ in millions) | **Plan Year 7** |
|---|---|
| State [1] | $36.4 |
| Federal [2] | $6.9 |
| Water User [3] | $41.7 |
| **Available Funding Total [4]** | $85.0 |
| **Projected Needs Estimate) [5]** | **$93.4** |
| **Original ROD Estimate (Aug, 2000) [6]** | $48.0 |
| Notes: | |
| [1] SDIP-$26mil; CCFS 10300cfs-$0.5mil; TFTF $2.2 mil; DCC Re-Op and Through Delta Facility, Franks Tract-$7.7mil | |
| [2] TFTF-$1.9mil; DMC/CA Intertie-$5mil | |
| [3] SDIP-$9mil SWP; Lower San Joaquin-$0.15mil SDWA; DMC/CA Intertie-$25mil (SWP); Temporary Barriers-$6.6mil SWP | |
| [4] SDIP-$35mil; CCFS 10300cfs-$0.5mil; DCC Re-Op and Through Facility-$0.2mil; TFTF-$4.1mil; DMC/CA Intertie $30mil; Lower San Joaquin $0.15mil (SDWA); Temporary Barriers-$6.6mil (SWP) | |
| [5] TFTF-$6.7mil; DMC/CA Intertie-$1mil; Lower San Joaquin-$0.15mil (USACE); ND FC/ERIP-$0.5mil - (combine with $85.0mil in available funding = $93.4mil) | |
| [6] Original ROD Estimates represents the original Stage 1 funding estimates from the Record of Decision (Aug 2000). | |

| Conveyance<br>($ in millions) | Plan Year 7 |
|---|---|
| South Delta Actions | |
| South Delta Improvement Program (SDIP) 8,500 cfs - Permanent Operable Barriers | $35 |
| Clifton Court Fish Screens / 10,300 cfs | $0.5 |
| Tracy Fish Test Facility (TFTF) | $4.1 |
| Lower San Joaquin Flood Improvements | $0.15 |
| North Delta Actions | |
| Delta Cross Channel Re-operation and Through Delta Facility | $7.7 |
| North Delta Flood Control and Ecosystem Restoration Improvement Program (ND FC ERIP) | $0.0 |
| Delta Mendota Canal/California Aqueduct (DMC/CA) Intertie Actions | |
| Delta Mendota Canal / California Aqueduct Intertie | $30 |
| CVP/SWP Clifton Court Forebay Intertie | -- |
| Complementary Actions | |
| Temporary Barriers | $6.6 |
| Additional Actions Under Delta Improvement Package | |
| Study of South Delta Hydrodynamics, Water Quality and Fish (see Clifton Court Fish Screens / 10,300 cfs) | - |
| Study of Delta Smelt and Fish Facilities (see TFTF) | - |
| State Water Project/Central Valley Project Integration Plan | |
| State Water Project/Central Valley Project Integration Plan (see SDIP) | - |
| **Available Funding Total** | $85.0 |
| Projected Needs Estimate [1] | $93.4 |
| Original ROD Estimate (Aug, 2000) [2] | $48.0 |
| Notes: | |
| [1] TFTF-$6.7mil; DMC/CA Intertie-$1mil; Lower San Joaquin-$0.15mil (USACE); ND FC/ERIP-$0.5mil - (combine with $85.0mil in available funding = $93.4mil)<br>[2] Original ROD Estimates represents the original Stage 1 funding estimates from the Record of Decision (Aug 2000). | |

# Conveyance Program Plan Year 7 - 9 Schedule

| ID | Task Name |
|---|---|
| 1 | **South Delta Actions** |
| 2 | **SDIP - 8500 and Permanent Gates** |
| 3 | Stage 1 EIR Certification and NOD |
| 4 | Construct & Operate Permanent Operable Gates |
| 5 | Stage 2 Evaluation & Permitting |
| 6 | **Clifton Court Fish Screens/10,300 cfs** |
| 7 | Study of South Delta Smelt and Fish Facilities |
| 8 | **Tracy Fish Test Facility** |
| 9 | Research, Design of Louvers and Cleaning System |
| 10 | Construct new secondary system |
| 11 | Begin construction Research Facility/ Land Development |
| 12 | Complete CHTR data collection/ analyses |
| 13 | **Lower San Joaquin River Flood Improvements** |
| 14 | Prepare PMP and conduct SJR Flood Control Study |
| 15 | **North Delta Actions** |
| 16 | **Delta Cross Channel Studies and Through Delta Facility** |
| 17 | **RMA Contract** |
| 18 | Conduct Modeling and Evaluations |
| 19 | Prepare Draft and Final Summary Reports |
| 20 | **Regional Field Study** |
| 21 | Conduct Fish, Flow and Water Quality Studies |
| 22 | DCC Re-Op Report |
| 23 | TDF Report |
| 24 | **Frank's Tract (CALFED Water Quality Program)** |
| 25 | Evaluate Flow and Water Quality |
| 26 | Prepare CEQA/NEPA Documents |
| 27 | Prepare Final Design of Pilot Study |
| 28 | **North Delta Flood Control & Eco Rest. Improvements** |
| 29 | Public Draft EIR w/o Preferred Alt. |
| 30 | Select Pref. Alt. and Identify Longterm Owner |
| 31 | Final EIR |
| 32 | **CVP/SWP Intertie Actions** |
| 33 | **DMC/CA Intertie** |
| 34 | Complete Final EIS |
| 35 | Complete ROD |
| 36 | Construction |
| 37 | **Clifton Court Forebay/Tracy PP Intertie** |
| 38 | **Complementary Actions** |
| 39 | **Temporary Barriers Program** |




Project: Schedule1
Date: Wed 5/31/06

Task | Remaining Milestone | Summary | Completed Milestone